

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

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GENERIC EU MSDS - NO COUNTRY SPECIFIC DATA - NO OEL DATA

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product name : Dimethyl sulfoxide

Product Number : D2650

Brand : Sigma

Company : Sigma-Aldrich
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2. HAZARDS IDENTIFICATION

This substance is not classified as dangerous according to Directive 67/548/EEC.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms : DMSO

Formula : C₂H₆OS

Molecular Weight : 78,13 g/mol

| CAS-No. | EC-No. | Index-No. | Classification | Concentration |
|---------------------------|-----------|-----------|----------------|---------------|
| Dimethyl sulfoxide | | | | |
| 67-68-5 | 200-664-3 | - | - | - |

4. FIRST AID MEASURES

If inhaled

If breathed in, move person into fresh air. If not breathing give artificial respiration

In case of skin contact

Wash off with soap and plenty of water.

In case of eye contact

Flush eyes with water as a precaution.

If swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with water.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special protective equipment for fire-fighters

Wear self contained breathing apparatus for fire fighting if necessary.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions

Avoid breathing vapors, mist or gas.

Environmental precautions

Do not let product enter drains.

Methods for cleaning up

Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE

Handling

Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge.

Storage

Store in cool place. Keep container tightly closed in a dry and well-ventilated place.

Store under inert gas. hygroscopic

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Personal protective equipment

Respiratory protection

Respiratory protection is not required. Where protection is desired, use multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Hand protection

For prolonged or repeated contact use protective gloves.

Eye protection

Safety glasses

Hygiene measures

General industrial hygiene practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Form liquid, clear

Colour colourless

Safety data

pH no data available

Melting point 18,4 °C

Boiling point 189 °C at 1.013 hPa

Flash point 87 °C - closed cup

Ignition temperature 301 °C

Lower explosion limit 3,5 %(V)

Upper explosion limit 42 %(V)

Vapour pressure 0,55 hPa at 20 °C

Density 1,1 g/cm³

Water solubility completely miscible

Partition coefficient: log Pow: -2,03
n-octanol/water

Relative vapour density 2,70
- (Air = 1.0)

10. STABILITY AND REACTIVITY

Storage stability

Stable under recommended storage conditions.

Materials to avoid

Acid chlorides, Phosphorus halides, Strong acids, Strong oxidizing agents, Strong reducing agents

Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon oxides, Sulphur oxides

11. TOXICOLOGICAL INFORMATION

Acute toxicity

LD50 Oral - rat - 14.500 mg/kg

LC50 Inhalation - rat - 4 h - 40250 ppm

LD50 Dermal - rabbit - > 5.000 mg/kg

Irritation and corrosion

Skin - rabbit - Mild skin irritation - 24 h

Eyes - rabbit - Mild eye irritation

Sensitisation

no data available

Chronic exposure

Carcinogenicity - rat - Oral

Tumorigenic: Equivocal tumorigenic agent by RTECS criteria. Skin and Appendages: Other: Tumors.

Carcinogenicity - mouse - Oral

Tumorigenic: Equivocal tumorigenic agent by RTECS criteria. Leukaemia Skin and Appendages: Other: Tumors.

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

Genotoxicity in vitro - mouse - lymphocyte

Cytogenetic analysis

Genotoxicity in vitro - mouse - lymphocyte

Mutation in mammalian somatic cells.

Genotoxicity in vivo - rat - Intraperitoneal

Cytogenetic analysis

Genotoxicity in vivo - mouse - Intraperitoneal

DNA damage

Developmental Toxicity - mouse - Intraperitoneal

Effects on Embryo or Fetus: Fetotoxicity (except death, e.g., stunted fetus). Specific Developmental

Abnormalities: Musculoskeletal system.

Reproductive toxicity - rat - Intraperitoneal

Effects on Fertility: Abortion.

Reproductive toxicity - rat - Intraperitoneal

Effects on Fertility: Post-implantation mortality (e.g., dead and/or resorbed implants per total number of implants).

Reproductive toxicity - rat - Subcutaneous

Effects on Fertility: Post-implantation mortality (e.g., dead and/or resorbed implants per total number of implants). Effects on Fertility: Litter size (e.g.; # fetuses per litter; measured before birth).

Reproductive toxicity - mouse - Oral

Effects on Fertility: Pre-implantation mortality (e.g., reduction in number of implants per female; total number of implants per corpora lutea). Effects on Embryo or Fetus: Fetotoxicity (except death, e.g., stunted fetus).

Specific Developmental Abnormalities: Musculoskeletal system.

Potential Health Effects

| | |
|----------------------|---|
| Inhalation | May be harmful if inhaled. May cause respiratory tract irritation. |
| Skin | May be harmful if absorbed through skin. May cause skin irritation. |
| Eyes | May cause eye irritation. |
| Ingestion | May be harmful if swallowed. |
| Target Organs | Eyes, Skin, |

Additional Information

RTECS: PV6210000

12. ECOLOGICAL INFORMATION

Elimination information (persistence and degradability)

no data available

Ecotoxicity effects

| | |
|--|--|
| Toxicity to fish | LC50 - Pimephales promelas (fathead minnow) - 34.000 mg/l - 96 h |
| | LC50 - Oncorhynchus mykiss (rainbow trout) - 35.000 mg/l - 96 h |
| Toxicity to daphnia and other aquatic invertebrates. | EC50 - Daphnia pulex (Water flea) - 27.500 mg/l |
| Toxicity to algae | EC50 - Lepomis macrochirus (Bluegill) - > 400.000 mg/l - 96 h |

Further information on ecology

no data available

13. DISPOSAL CONSIDERATIONS

Product

This combustible material may be burned in a chemical incinerator equipped with an afterburner and scrubber. Observe all federal, state, and local environmental regulations.

Contaminated packaging

Dispose of as unused product.

14. TRANSPORT INFORMATION

ADR/RID

Not dangerous goods

IMDG

Not dangerous goods

IATA

Not dangerous goods

15. REGULATORY INFORMATION

Labelling according to EC Directives

Further information:

The product does not need to be labelled in accordance with EC directives or respective national laws.

16. OTHER INFORMATION

Further information

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